Activity-Based Costing Via an Information System: An Application Created for a Breast Imaging Center

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Activity-based costing (ABC) is a process that enables the estimation of the cost of producing a product or service. More accurate than traditional charge-based approaches, it emphasizes analysis of processes, and more specific identification of both direct and indirect costs. This accuracy is essential in today's healthcare environment, in which managed care organizations necessitate responsible and accountable costing. However, to be successfully utilized, it requires time, effort, expertise, and support. Data collection can be tedious and expensive. By integrating ABC with information management (IM) and systems (IS), organizations can take advantage of the process orientation of both, extend and improve ABC, and decrease resource utilization for ABC projects. In our case study, we have examined the process of a multidisciplinary breast center. We have mapped the constituent activities and established cost drivers. This information has been structured and included in our information system database for subsequent analysis.

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HEALTHCARE ACCOUNTING is a methodology for providing information to management to maximize resources and make managerial decisions. The earliest form of healthcare accounting is traditional cost accounting. The traditional costing view is that services consume resources, which translates into a practice of assigning direct costs while allocating indirect costs on a volume basis. While traditional cost accounting is relatively inexpensive and fairly easy to implement, it is relatively inaccurate for services with a majority of indirect costs, one being the radiologic procedure. However, accuracy is essential in today's healthcare environment, in which managed care organizations necessitate responsible and accountable costing. Therefore, an alternative costing scheme offering greater accuracy is necessary. Activity-based costing (ABC) has been utilized for this purpose. Additionally, ABC holds relevance for cost effectiveness. While we generally know the effectiveness of a procedure, it is useful to combine this information with cost data obtained through

ABC analysis to make more informed clinical decisions.

In theory, the ABC view is that services or products consume activities, then activities consume resources. This fundamental concentration on activities fosters greater accuracy as costs are more specifically distributed to their respective sources. In practice, activities are detailed through process identification and costs are assigned. Like traditional accounting, direct costs are directly assigned; however, unlike the traditional volume-based allocation of indirect costs, indirect costs are assigned to each activity by a cost driver. A cost driver is any factor that causes a change in the cost of an activity. These cost drivers are predetermined and specific.

While ABC does provide benefits to a health care organization, ABC implementation is no easy task; rather, undertaking this endeavor requires time, effort, expertise, and support. However, by integrating an ABC effort with an organization's information system such difficulties can be diminished and resources necessary for ABC projects will be decreased, while at the same time increasing accuracy, reproducibility, and responsiveness. Previously, cost accounting was done over a limited time span; however, through system integration, this analysis can be continuous, providing the organization with current, real-time data with which to base analysis and make managerial decisions. Through this real-time analysis, ABC can be integrated into a continuous quality improvement (CQI) effort to study process changes and drive improvement.

In our case study of ABC costing, we have examined a multidisciplinary breast center. The breast center is a logical starting point for our demonstration in that it is self-contained with a limited number of exams and processes. Our most recent focus has been on screening and diagnostic mammography. These are the most common of the center's activities and the procedures are easily detailed, fairly consistent, and fairly similar. We have studied and documented the process and mapped the constituent activities. Cost drivers have been established for each cost factor along the process. This information has been structured and included in our information system database infrastructure for subsequent analysis.

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